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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,812	04/02/2004	John David Sosnowski	29250-001093/US	9378

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EXAMINER	
SWERDLOW, DANIEL	

ART UNIT	PAPER NUMBER
2646	

DATE MAILED: 10/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/815,812	SOSNOWSKI ET AL.	
	Examiner	Art Unit	
	Daniel Swerdlow	2646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☒ Claim(s) *5,8,20,22 and 23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

KV.

DETAILED ACTION

Claim Objections

1. Claim 5 is objected to because of the following informalities: the word "pair" appears at the end of the second line instead of the word --power--. Appropriate correction is required.

2. Claim 8 is objected to because of the following informalities: the word --of-- is omitted at the end of the first line. Appropriate correction is required.

3. Claim 20 is objected to because of the following informalities: the word "In" spuriously appears at the beginning of the first line. Appropriate correction is required.

4. Claims 22 and 23 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 22 is drawn to a device in an arrangement. As such, the limitations on the arrangement in which the device is disposed do not limit the device itself.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1 through 3, 7 through 11 and 16 through 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Cohen (US Patent 6,665,404).

7. Regarding Claim 1, Cohen discloses remote line powering (i.e., transmitting electric power from a power source to a remote load) (column 1, lines 47-57) via telecommunication line pairs (i.e., telephone twisted pair) comprising: supplying electric power via a plurality of line pairs (i.e., transmitting from the power source a plurality of electric power feeds over a plurality of twisted pairs) (column 1, lines 49-51) with each power feed using a maximum voltage of 320 VDC and a maximum current of 60 mA (column 2, lines 10-12) (i.e., 320 x 0.060 = 19.2 watts); generating at each of a plurality of separate (i.e., independent) power supervisor, controller and power stage converter arrangements (Fig. 1, reference 30, 35, 40; column 4, lines 7-38) that correspond to the power converters claimed and each output voltage associated with a single line pair (i.e., based on receipt of a given power feed from a corresponding twisted pair); and aggregating (i.e., combining) the output voltages to provide an aggregate output voltage (column 4, lines 40-43) to provide power for an appliance (column 3, lines 62-66) that corresponds to the downstream remote load claimed.

8. Regarding Claim 2, as shown above apropos of Claim 1, Cohen discloses limiting current on a given wire pair to 60 mA, which given the maximum voltage of 320 VAC disclosed does not exceed a feed power of 100 watts.

9. Regarding Claim 3, as shown above apropos of Claim 1, Cohen discloses supplying electric power via a plurality of line pairs (i.e., transmitting from the power source a plurality of electric power feeds over a plurality of twisted pairs) (column 1, lines 49-51) and generating at each of a plurality of separate (i.e., independent) power supervisor, controller and power stage

converter arrangements (Fig. 1, reference 30, 35, 40; column 4, lines 7-38) that correspond to the power converters claimed and each output voltage associated with a single line pair (i.e., received over a single twisted pair).

10. Regarding Claim 7, Cohen further discloses on startup, waiting for the apparatus to identify itself (i.e., delaying enabling of a low-voltage output) so that electrical power is conveyed at the steady state after the apparatus has been verified (i.e., to synchronize the plurality of independent remote power converters at the load) (column 4, lines 58-65).

11. Regarding Claim 8, Cohen further discloses delaying until verification that the apparatus terminates the line pairs (i.e., is a function of loading presented by the load) (column 4, lines 60-63).

12. Regarding Claim 9, as shown above apropos of Claim 1 Cohen discloses a power feed per wire pair of 19.2 watts. Cohen further discloses aggregation of power from 16 wire pairs (column 5, lines 55-58). As such, Cohen discloses delivering a power of 19.2 x 16 = 306 watts.

13. Claim 10 is essentially similar to Claim 1 and is rejected on the same grounds.

14. Regarding Claim 11, Cohen further discloses drawing additional power only if doing so would not breach safety parameters (column 5, lines 42-45). This inherently teaches a power limiter. Further as applicant admits in paragraph [0010] of the disclosure, a power feed of 100 watts would breach safety parameters.

15. Claim 16 is essentially similar to Claim 1 and is rejected on the same grounds.

16. Claim 17 is essentially similar to Claim 7, including the elements of its base claim, Claim 1, and is rejected on the same grounds.

17. Regarding Claim 18, Cohen further discloses delay until the apparatus presents a signature on the line pairs (i.e., at least one threshold) (column 4, lines 58-65).

18. Regarding Claim 19, Cohen further discloses delay until the apparatus presents a signature on the line pairs (column 4, lines 58-65). Cohen further discloses input path capacitors (Fig. 1, reference 40). As such, the delay for signature presentation inherently depends on the size of the capacitor.

19. Claim 20 is essentially similar to Claim 7, including the elements of its base claim, Claim 1, and is rejected on the same grounds.

20. Claim 21 is essentially similar to Claim 5, including the elements of its base and intervening claims, Claims 1 and 4, and is rejected on the same grounds.

21. Claims 22 and 23 are not further limiting on Claim 21 for reasons stated above under Claim Objections. As such, Claims 22 and 23 are rejected on the same grounds as Claim 21.

22. Claim 24 is essentially similar to Claim 11, including the elements of its base claim, Claim 10, and is rejected on the same grounds.

23. Claim 25 is essentially similar to Claim 10, and is rejected on the same grounds.

24. Regarding Claim 26, as shown above apropos of Claim 1 Cohen discloses a power feed per wire pair of 19.2 watts. Cohen further discloses aggregation of power from 16 wire pairs (column 5, lines 55-58). As such, Cohen discloses delivering a power of 19.2 x 16 = 306 watts.

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

26. Claims 4 through 6 and 12 through 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen in view of Fujiwara et al (US 2004/0228060 A1).

27. Regarding Claim 4, as shown above apropos of Claim 1, Cohen discloses all elements of except transient protection without a fuse or voltage controlled shorting switch. Fujiwara discloses a telephone interface protection circuit that protects electronic equipment from transient events on subscriber telephone lines [0002]. Fujiwara further discloses the circuit comprising only a positive temperature coefficient thermistor and a voltage limiting element (Fig. 1, reference PTC, ZNR [0020]). Fujiwara further discloses that such an arrangement provides reliable protection at low cost [0014]. It would have been obvious to one skilled in the art at the time of the invention to apply the protection circuit taught by Fujiwara to the power system taught by Cohen for the purpose of realizing the aforesaid advantages.

28. Regarding Claim 5, Fujiwara further discloses the circuit resets itself when the triggering event ceases (i.e., momentarily interrupting and reconnecting after the transient has passed) [0024].

29. Regarding Claim 6, Cohen further discloses compensating for failure on a pair by drawing additional power over remaining pairs (i.e., the effects of a transient do not reflect in an interruption of power to the load) (column 5, lines 39-42).

30. Regarding Claim 12, as shown above apropos of Claim 10, Cohen discloses all elements of except the transient protection device. Fujiwara discloses a telephone interface protection circuit that protects electronic equipment from transient events on subscriber telephone lines

[0002]. Fujiwara further discloses that such an arrangement provides reliable protection at low cost [0014]. It would have been obvious to one skilled in the art at the time of the invention to apply the protection circuit taught by Fujiwara to the power system taught by Cohen for the purpose of realizing the aforesaid advantages.

31. Regarding Claim 13, Fujiwara further discloses the circuit comprising only a positive temperature coefficient thermistor and a voltage limiting element (i.e., without a fuse or voltage controlled shorting switch) (Fig. 1; reference PTC, ZNR [0020]).

32. Regarding Claim 14, Fujiwara further discloses the positive temperature coefficient thermistor is in series with the line pair (Fig. 1, reference PTC) and resets itself when the triggering event ceases (i.e., momentarily interrupting and reconnecting after the transient has passed) [0024].

33. Regarding Claim 15, as shown above apropos of Claim 1 Cohen discloses a power feed per wire pair of 19.2 watts. Cohen further discloses aggregation of power from 16 wire pairs (column 5, lines 55-58). As such, Cohen discloses delivering a power of 19.2 x 16 = 306 watts.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Swerdlow whose telephone number is 571-272-7531. The examiner can normally be reached on Monday through Friday between 7:30 AM and 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh H. Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Swerdlow
Examiner
Art Unit 2646

ds
5 October 2005